

**ABSTRACT**

A vehicle control system capable of precisely estimating an auxiliary machine motive power without increasing a processing load of an engine control means. An engine ECU 13 is provided with a first auxiliary machine motive power estimating section 16, and an auxiliary machine ECU 15 is provided with a second auxiliary machine motive power estimating section 17 having higher estimation precision than that of the first auxiliary machine motive power estimating section 16. Torque estimated values Tcomp1 and Tcomp2 for an auxiliary machine 14 are obtained respectively by the first auxiliary machine motive power estimating section 16 and the second auxiliary machine motive power estimating section 17, and control of an engine 11 is performed based on these torque estimated values Tcomp1 and Tcomp2.